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Will Universities Survive the 21st Century?

Alan Ruby

University of Pennsylvania, alanruby@gse.upenn.edu

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ALAN RUBY

Will Universities Survive the 21st Century?

Introduction

Will universities survive the 21st century? A prudent academic answer to this provocative question is “probably”. A more instructive response is “let’s talk about that”. And that conversation is essentially what the HEAD Foundation started at its public forum in May 2015.

My contribution to that discussion covered the essentially conservative nature of universities and colleges, the public and private purposes of higher education, and the recent phenomenon of massive open online courses (MOOCs).

Conservative Institutions Are Likely to Persist

Universities are conservative in the sense that they create, protect, and transmit knowledge across generations. The faculty works to create and codify knowledge, linking

it to and testing it against the existing body of knowledge. By sharing knowledge with others and helping them to understand its importance and usefulness, the faculty preserves knowledge and makes it available to future generations. The act of teaching is, in one sense, conserving knowledge.

This conserving function tends to make universities and colleges slow to change. They are what Gérard Roland (2004) calls “slow-moving” institutions: those that change “slowly, incrementally, and continuously” rather than “rapidly and irregularly” or “discontinuously”. Universities are slow moving because they deal with the acquisition of knowledge, values, culture, and technology. All four are relatively slow to change although technological innovation can be abrupt and irregular.

And all four tend to move in tandem as beliefs about what matters in human interactions influence and shape culture, the use of technology, and the search for new knowledge. This interconnectedness is another factor for why universities are slow to change. In short, the mission of universities and the means they use to carry out that mission makes them cautious and conservative, and this is likely to persist over time.

This persistence was famously captured by Clark Kerr's (1982) observation in the 1980s that of the 85 Western world institutions that had continued unchanged since the Year 1500, 70 were universities "still in the same location, with some of the same buildings, with professors and students doing much the same things and with governance carried on in much the same ways" (p. 24).

Institutions of higher learning have also persisted in Asia. The Han Dynasty's Imperial University was established as a pathway to civil service occupations that grew, diversified, and persisted in various forms until the early 1900s. Hanoi's Temple of Literature built in 1070 had a similar function, as did Okinawa's scholar bureaucrat community Kumemura – both ceased to operate on those sites in the late 1800s.

While the longevity of these types of institutions is grounded in their role as protectors and transmitters of knowledge and values, it is also embedded in their public purpose.

Institutions with a Definite Public Purpose Will Persist

Broadly conceived higher education has long had a public purpose: it was to do some tasks that were for the common good, for the community, or the people of the nation. Those things included what many, including my colleague Matt Hartley (2009), refer to as "preparing an enlightened citizenry", that is, educating generations of young people to be able to govern themselves and lead others. Higher education also prepared people for the professions such as law, the church or temple, and for public office and public service. These functions plus the role universities played in creating and preserving knowledge benefitted all. As a consequence, public expenditure on higher education was seen as a legitimate use of tax revenues.

When higher education was only taken up by only a few (the elite), the public investment was modest but the public benefit readily apparent. This generated political and often public support for universities and

encouraged them to continue as they were – largely unchanged.

In the last 50 years in the most industrialised nations, participation in higher education has widened and deepened. More people have aspired to post-secondary education. Economies have diversified and moved away from agriculture and manufacturing to knowledge- and service-based industries increasing the demand for well-educated people. Governments also saw that there was an untapped “pool of ability” that was not being served: young people who were from a range of social backgrounds and who were able and willing to benefit from higher education. They were a source of comparative economic advantage for nations that could be realised through increased expenditure on universities.

Consequently, participation in higher education increased rapidly from the 1950s onwards. In most industrialised nations, it became a mass phenomenon, with 30 to 40 per cent of young people continuing education past secondary school. And in recent years, this proportion

has increased to 50 to 60 per cent. Some of the growth in demand was met by new types of institutions – universities that emphasised teaching rather than a combination of research and teaching, and offered pre-professional programmes such as nursing and accounting.

While this increased participation was desirable, it was (and still is) expensive. It placed greater demands on public expenditures at a time when some populations were ageing and health costs were increasing. The public benefit of a larger well-educated workforce was also not always so readily apparent. Yet the private benefit, the individual’s increased income or improved lifestyle, was clearly

observable. Inequities were also increasing as higher education tended to be taken up by children from more affluent families.

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A common response to this set of circumstances was to shift the cost of higher education to the individual or the family. Tuition fees became common and were (and still are) often

a substantial part of a university’s operating budget. Public expenditure was supplemented by private

investment encouraging a market view of higher education where the student was a client purchasing services from the university provider.

This commercialisation coupled with the growth of career-oriented courses and limited public funds because of economic volatility and regional financial crises eroded the clear sense of public purpose that had previously protected most universities from disruptive change. It opened the field to the growth of private and for-profit higher education in developed and developing economies.

In some cases, for-profit universities were “demand-absorbing”, providing opportunities for young people who could not get into a public university (Levy, 1986). Others used distance learning techniques to cater for groups unable to attend conventional universities. Whatever the platform or target population, the growth of this type of “university” further diminished the clear sense of public purpose.

The open question is whether a shift in mission from a principal focus on preparing citizens and serving the common good to a mission that mixes individual benefit, private good, and broader public purposes will hasten the demise of the

traditional university. Proponents of the relatively new wave of MOOCs see them as alternative way of increasing access to higher education and reaching underserved populations.

Are MOOCs an Alternative Pathway?

The defining characteristics of MOOCs are evolving but they are essentially discrete sets of content (courses), aimed at large numbers of users (massive), usually with no tuition cost and with few or no requirements to access the content (open), delivered via various digital platforms (online).

They are successors to the earlier forms of distance education like correspondence schools – with radio- and television-based courses – and open universities like those in South Africa and the UK. All designed to use “new” technologies to increase access to higher education.

Downes, Siemens and Cormier are credited with originating this wave of innovation. In 2008, they launched a connectivist MOOC (cMOOC), which aimed to use technology to create a learning community where individuals would participate just as they would in a traditional tutorial or seminar (Downes, 2012, p. 9).

Some years later, large online courses that used a traditional lecture format emerged. For example, in late 2011, Stanford's Sebastian Thrun and Peter Norvig launched the first xMOOC (MOOCs that are extensions of traditional university courses), "Introduction to Artificial Intelligence", with 160,000 users. The success of the course led to the establishment of competing MOOC platforms. Thrun founded *Udacity* in 2012, Stanford's Daphne Koller and Andrew Ng founded *Coursera*, and MIT and Harvard founded *edX*.

Coursera, a for-profit entity, now offers 1040 courses through 119 university partners. There are 25 course categories: the biggest is the Humanities with more than 180 courses, Teacher Professional Development with over 90 course, and Arts with 50 plus courses. In total, *Coursera* attracts more than 13 million users.

Although impressive, the high numbers of offerings and users do not immediately trigger the transformation of traditional universities. Scale does not equate to impact. In this case, it raises the question of completion. What proportion of users progress through the courses and complete?

With a set of talented colleagues (Perna et al., 2014), I helped address this question by examining 16 MOOCs offered at the University of Pennsylvania between June 2012 and June 2013. These courses had over 700,000 registered users, people who had signed on and agreed to the code of academic conduct. Of these, over 540,000 started a course but course completion rates were low, no matter how we measured it. This holds for the rate users accessed the last lecture, attempted the last quiz, or attained a final grade of at least 80 per cent. Across the 16 courses, only 5 to 18 per cent of registrants clicked on the last lecture.

The low "completion" rates and very high attrition rates in the first week or two of courses may reflect the novelty of MOOCs: they attracted curious users who had no intention of completing. As browsing was cost free, there was no impediment to visiting courses. For this and other reasons, some (e.g., Koller, Ng, Chuong & Chen, 2013) argue that completion rates are inappropriate measures of a MOOC as they do not reflect users' intentions and learning goals such as personal growth and short-term career or vocational needs.

While there is great value in offering access to first-rate content

and inspiring learning material without questioning the benefits many individuals have gained from MOOC experiences, the nature of the offerings still falls short of the desired outcomes of either a liberal education or a pre-professional programme.

Three quarters of *Coursera's* current offerings are discrete units of content including the popular social psychology course from Wesleyan University and the “learner recommended” course “The Music of the Rolling Stones 1962–74”, offered by the University of Rochester. The list of courses is eclectic and varied.

MOOC “credits” from these discrete courses do not readily aggregate into national credentials validated by an assessment or accreditation

agency. Nor are they aligned to a national qualification framework that allow for occupational mobility and free movement of labour between employers. Instead, they offer badges of completion, symbols of time served, or endorsements by

peers. The latter can be valuable parts of the learning process and good measures of learning when moderated and supported by formal rubrics, or they can be an aggregation of informed and less informed judgements, such as dining reviews on *Yelp* or some other crowd-sourced social media site.

A quarter of the courses on *Coursera's* platform offer “verified certification” and about 10 per cent are “eligible for specialisation”. Verified certificates are available when the user achieves a passing grade in a course, verifies every assignment by a unique typing pattern and photo identification, and pays the fee set by the participating university.

Specialisations are packages of courses that are a coherent set of experiences leading towards the mastery of a particular technical skill or competence. An example is John Hopkins University's Data Science sequence of nine courses with two pre-requisites and a capstone assignment.

Both verified certificate courses and specialisations have fees and barriers to entry: requirements for personal identity data and, in the case of the Data Science example, pre-requisites. This reduces the “open”

...the nature of [MOOC] offerings still falls short of the desired outcomes of either a liberal education or a pre-professional programme.

characteristics of these MOOCs which, in turn, reduces participation – the “M” for massive starts to shrink towards “L” for large. The reduction in scale and the introduction of fees start to make MOOCs seem like another version of distance learning, a phenomenon that has not fundamentally changed universities in the last 150 years.

Conclusion

There are many elements to this debate about the persistence and resilience of “the university”. I deal here with three only. The conservative nature of universities and colleges as creators, protectors, and transmitters of essential knowledge and values has enabled them to endure largely unchanged for centuries. This is true for the modern Western universities and for the imperial colleges of China and Vietnam.

The broad public purpose of universities to prepare informed and well-educated citizens and to contribute to the common good has for many years justified public expenditure on higher learning. As participation in higher education increased, as individual benefit

became more apparent, and as competition for public funds intensified, the notions of a higher education market place began to erode the clear public purpose. Universities of differing shapes and missions emerged including for-profit entities, single discipline colleges, and teaching-only programmes.

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MOOCs are the latest attempt to increase participation and to reach underserved populations. Completion rates are low and the shift towards fee-based courses has re-oriented MOOC providers towards those who can pay. They offer a cheaper pathway to content

than conventional universities, but they do not offer a nationally or regionally recognised credential.

These are just three elements of a wider debate. It is a worthwhile debate, as is all discussion about the shape and direction of significant social institutions. Forced to make a conclusion, or a prediction, about the longevity of universities, I would join with the 19th French writer Alphonse Karr: “the more things change, the more they remain the same”.

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